STINGER RMP MISSILE

The Stinger missile is the Army's system for short-range air defense. It provides the ground maneuver commander with force protection against low-altitude airborne targets, such as fixed-wing aircraft, helicopters, unmanned aerial vehicles, and cruise missiles. The Stinger is launched from a number of platforms: Bradley Linebacker, Avenger on High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) and helicopters, as well as the Man-Portable Air Defense configurations.

There are two upgrades to the Stinger-Reprogrammable MicroProcessor (RMP) missile to correct known operational deficiencies of the original Stinger-RMP missile system. The first upgrade, called Stinger-RMP Block I, made software and hardware changes, including a new roll frequency sensor, a small battery, and an improved computer processor and memory. It is currently in the Army and Marine Corps inventory. The second upgrade, Stinger-RMP Block II, added an advanced imaging array infrared (IR) seeker and additional signal processing software. The Stinger-RMP Block II missile was intended to provide improved performance against targets in clutter, more advanced stealthy cruise missiles, unmanned aerial vehicles (UAVs), and suppressed helicopter targets, as well as improved performance during nighttime operations.

BACKGROUND INFORMATION

Operational deficiencies were discovered during testing of the Stinger-RMP missile in the late 1980s. The Secretary of Defense directed the Army to correct the deficiencies and then operationally test the fixes. In 1990, DOT&E approved the operational test plan. The Stinger-RMP missile test program was suspended during Operation Desert Storm, and the missile was rushed into the field. After the Gulf War, the Army proposed a two-phase upgrade program: Stinger-RMP Block I and Stinger-RMP Block II, as described above. Subsequently, the Army conducted tests on the Stinger-RMP Block I without DOT&E approval because the test firings were only conducted within the inner-half of the engagement envelope, not always by the soldiers, not against multiple and maneuvering targets, limited to one firing at night, and after a countdown that predetermined the engagement parameters. Fifteen developmental test firings were conducted between 1993 and 1996 to verify Stinger-RMP Block I hardware and software improvements.

In 1999, the Army prepared the Stinger-RMP Block II program for a Milestone II decision in 1QFY00; DOT&E worked with the Army in developing a test strategy. The activities accomplished

included the approval of an updated Operational Requirement Document, an updated System Threat Assessment Report, and new Critical Operational Issues.

The Army proposes to field more than 13,000 Stinger-RMP Block I missiles. These missiles will remain in inventory until at least 2020. There were also plans to produce approximately 11,000 Stinger-RMP Block II missiles. The Army canceled the Stinger-RMP Block II missile program in early FY00. However, there have been indications that the Army is planning to go ahead with incorporating the focal plane array IR seeker into the Stinger RMP missile.

As a separate but related issue, Congress has urged the Army to evaluate the Air-to-Air advantages and disadvantages that Stinger RMP Block I and the British Starstreak missiles provide for the AH-64 Longbow Apache. This comparative analysis will include live Stinger and Starstreak shots off the Apache helicopter.

TEST & EVALUATION ACTIVITY

All T&E activities on the Stinger-RMP Block II program were suspended when the Army canceled the Block II program. However, there had been an effort initiated to incorporate the focal plane array IR seeker in the Stinger missile.

Planning for the Stinger/Starstreak tests continued this year. Integration and pre-test activities are currently ongoing at multiple locations. Starstreak firings for safe separation, envelope expansion, and captive flight trials for tracking are scheduled for 2-3QFY02. This will be followed by Stinger firings for system readiness and then side-by-side firings to be conducted beginning in 4QFY02.

TEST & EVALUATION ASSESSMENT

DOT&E believes that the currently fielded Stinger-RMP Block I missile was not adequately tested, because the test conditions were not representative of how the missile would be fired in combat. Thus, modifications to resolve known RMP baseline operational deficiencies were not verified and the Block I effectiveness and suitability remains unknown.

As a result of the Stinger-RMP Block II missile system cancellation, the following significant operational shortfalls, which affect the Army's ability to conduct short-range air defense, remain with this system: (1) limited operational capability to defeat the growing threat of UAVs and cruise missiles; (2) limitations remain against helicopters and fixed-wing aircraft that have more sophisticated countermeasures or that may operate in a clutter environment; and (3) diminished effectiveness of the forces equipped with Stinger missiles during night operations.